REMARKS

In the final Office Action, the Examiner rejected claims 1 - 9 and 11 - 13 as obvious over the **Mason** et al. reference in view of **Christensen**.

In **Mason** et al., in particular in column 12, lines 20 through 25, it is noted that Mason et al. deals with a DICOM tool kit and therewith with other relationships than those with which the subject matter of the present patent application is concerned. DICOM is thereby a general industry standard. A communication mechanism **between** two **applications** is specified in Mason et al. as well as in Christensen et al. This can be comprised of DICOM or OLE as is clear from the drawing in the attached Appendix A.

In contrast to this, in the present patent application, the architecture for an application corresponding to the MVC concept (model view controller) is specified. ATOMIC is thereby used for this as a communication mechanism between individual software components of an application. However, it can also be OLE, for example.

Mason et al. describes a vendor-specific standard communication for DICOM – a communication mechanism. This communication mechanism known from Mason et al. relates to using DICOM and differs from the present invention because, for example, mouse and key events are communicated in the present patent application. It is thereby possible to freely plug components together.

The communication ensues synchronously in **Mason** et al. and **Christensen** et al., while the communication runs asynchronously with the present invention. In the subject matter according to Mason et al. and Christensen et al. it can therefore lead to deadlocks.

Mason et al. describes "processing the images", i.e. a manipulation of the DICOM attributes. This does not correspond to images processing such as, for example, 3D or cardiac evaluation etc. Such remote interactions of DICOM between processes are, for example, C-STORE, C-FIND etc.

However, no mouse events, no algorithm controls (interactive), no data deletion, no connection between data and functions across or on the other side of the DICOM SOP class are described as in the subject matter of the present patent application.

The present three-layer architecture corresponds to an application (inside application). The cooperation between applications with regard to invocation or events such as, for example, shutdown, close, patient, user switch, and the like.

An important new feature is the combination of Microsoft OLE Custom Controls (OCX), a newly created software technology, with another, general Microsoft Scripting Standard interface that serves as a fully distributable network-wide mechanism for the propagation of an event (referred to as an event propagation mechanism) as soon as network-wide OLE is available in order to obtain a realistic Model View Controller concept (MVC) based system architecture.

Further, Microsoft OCX can be inventively combined with OLE Automation and with software-IC connections for the distributed propagation of an event (referred to as an event propagation) with local between all components. This provides the flexibility for the distribution of components over the network combined with binary-compatible interfaces based on shared libraries. Objects which are distributable and GUI dependent as well as not GUI-dependent are thus obtained.

This combination of software-ICs and OCX/Automation interfaces enables an execution architecture to define executable processes not by design but mainly by configuration of shared program components (shared libraries (or DLLs - dynamic link libraries)) at runtime together with the possibility of scripting.

Figure 2 shows a first example of a software architecture according to the MVC concept (Model View Controller) wherein the view, control and model components are respectively contained in different processes. The view area is located in a dynamic link library (DLL) of an in-process server 16.

The software-IC connections allow a truly arbitrary distribution of the components in executable processes without ending up in lock-up states as can be the case in other communication mechanisms (for example, Corba) without source code modification. The components can even be arbitrarily combined at the run time as a result thereof. Another advantage is that the connections can be n:m connections (n suppliers and m consumers), which is usually not possible in traditional systems, whereby the connection parties anonymously find one another at the run time according to ATOMIC.

In addition, the component connections also differ from traditional connections in that event data are transmitted on the connections and no remote methods are called. The usage of remote methods makes it difficult to adapt the business logic of a component to the needs of new imaging systems without braking the signature and the semantic of the component's external interface.

Thus, the present invention provides a loose connection of the three parts of the software. The viewing part, controlling part and modeling part are loosely coupled to one another to permit some parts to be re-used by the workstations other modalities rather than requiring that all of the parts be installed on the computer to perform the functions on data from every modality.

Thus, the invention as disclosed and claimed is patentably distinct from the cited prior art, whether considered alone or in combination. As such withdrawal of the obviousness rejection and reconsideration and allowance of the present application is hereby requested.

Respectfully submitted,

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